

Conclusions: Facilitation using ROTA improves peri-procedural success without increasing complications for severely calcified ULM stenosis. Especially in no HD patients, excellent results were obtained at 1-year. However, the development of TLR-MB had still occurred in 38% of the HD patients despite optimal stent expansion.

TCT-410

Comparison of Coronary Artery Bypass Surgery, Percutaneous Drug-eluting Stent Implantation, and Medical Therapy for Unprotected Left Main Coronary Artery Disease

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Background: Unprotected left main coronary artery (ULMCA) disease is considered an indication for revascularization. However, in "real-world" clinical practice some patients receive medical therapy only. The aim of this study was to evaluate long-term results in patients with ULMCA disease in a "real-world" practice.

Methods: Between January 2006 and June 2011, 218 stable patients were diagnosed with de novo ULMCA stenosis. 52 (23.9%) patients received medical therapy only, coronary artery bypass grafting (CABG) was performed in 106 (48.6%) patients, percutaneous coronary intervention (PCI) in 60 (27.5%) patients. The composite of death, myocardial infarction, and stroke defined as major adverse cardiac and cerebrovascular events (MACCE) and target vessel revascularization (TVR) were defined as primary endpoints. The median follow-up period was 4 years.

Results: Baseline clinical and descriptive morphology of coronary artery disease revealed more comorbidities and more complex anatomies in the medical therapy group compare with CABG and PCI groups. Revascularization might not have been used due to physician's decision (operative risk considered excessive) in 24 (46.2%) cases or when patients refused revascularization in 28 (53.8%) cases. At 4-year follow-up MACCE rate was higher in nonsurgical group (34.6%) compare with CABG (13.2%; $p=0.002$) and PCI (14.5%; $p=0.016$) groups, but there was no difference between CABG and PCI groups. Survival in CABG (4.7%; $p<0.001$) and PCI (5.5%; $p=0.009$) groups was higher in compare with nonsurgical group (23.1%). On the multivariable Cox regression analysis, coronary revascularization (CABG and PCI) was independent predictor of long-term survival (HR 3.49; 95% CI 1.39-8.75; $P<0.001$).

Conclusions: PCI, like CABG improves survival for patients with unprotected left main coronary artery disease compared with medical therapy only in "real-world" clinical practice.

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DES with bioresorbable polymer in the treatment of true bifurcation lesions – results of a large registry

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Background: Clinical outcomes after treatment of true bifurcation lesions (Medina classification: 1.1.1, 1.0.1 and 0.1.1) are in general inferior when compared to non-true bifurcation lesions (1.1.0, 0.0.1, 0.1.0). Therefore, our aim was to compare clinical outcomes of the patients with true and non-true bifurcation lesions treated with Nobori DES. This stent with open cell design and bioresorbable polymer is expected to perform well in lesions involving bifurcation.

Methods: Within the large, prospective, single-arm, multi-centre, eNOBORI registry, 898 patients (1541 lesions) had at least one bifurcation treated. Bifurcation lesions (BL) were divided into true (TBL, 512 patients; 927 lesions) and non-true bifurcation lesions (NTBL, 386 patients; 614 lesions). All adverse events are adjudicated by an independent clinical event committee. Primary endpoint of the study is target lesion failure (TLF) at 1 year.

Results: Patients in both groups had similar baseline characteristics, except that patients with TBL were less often male (74.8% vs 81.6%) and presented more often with renal failure (8.1% vs 4.7%). Average number of lesions treated per patient and stents implanted per lesion was higher in TBL than in NTBL (2.46 ± 1.50 vs 2.15 ± 1.50 ; $p<0.01$ and 1.28 ± 0.55 vs 1.16 ± 0.43 ; $p<0.01$, respectively). According to the Medina classification, the most frequent lesion type in TBL was [1.1.1] (66.2%), whereas in NTBL, [1.1.0] type was most abundant (42.9%). Direct stenting was more frequent in NTBL (35.9% vs 22.6%; $p<0.01$) and procedural success was similar in TBL and NTBL groups (98.2% vs 99.2%). In the TBL group, 3 patients died (1.0%; cardiac), 5 patients had TV-MI (1.7%) and 9 patients a TLR (3.0%) at 12 months, resulting in TLF of 6.0%. In the NTBL group, 1 patient died (0.5%; cardiac), 2 patients had TV-MI (0.9%) and 4 patients a TLR (1.9%), resulting in a TLF of 3.2%. No stent thrombosis were observed in the NTBL whereas 2 definite, subacute ST (0.48%) occurred in TBL patients ($p=NS$).

Conclusions: As expected, clinical outcomes after treatment of true bifurcation lesions were less favorable compared to the non-true bifurcation lesions however, the results of both cohorts are very good up to one year.

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Long Term Outcome After Biodegradable Polymer Coating Biolimus-eluting Stent Implantation for Bifurcation Lesions

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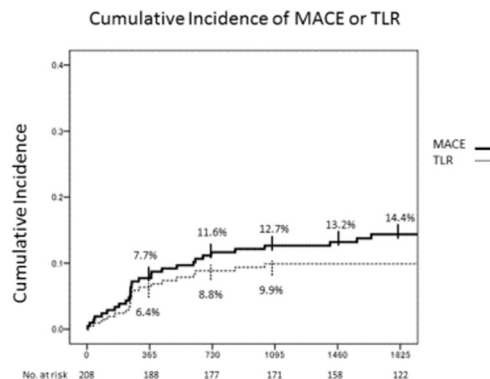
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Background: Long term clinical outcomes after biodegradable polymer eluting stents implantation at bifurcation lesions are unclear.

Methods: We analyzed 203 consecutive patients (208 bifurcation lesions treated) who were treated with PCI with biodegradable polymer coating biolimus-eluting stent (BES) exclusively at our institution between February 2005 and April 2009. They were followed up prospectively after the PCI (median follow-up 1931 days).

Results: One hundred sixty one patients (79%) were male and mean ages were 69 ± 10.3 . LMT lesions were 63(30%). Eighty lesions(38%) were treated by culotte stenting technique and other 128 lesions(61%) treated by stenting and kissing balloon technique(S-KBT). We evaluated the incidence for MACE, which were defined as a combined end point of cardiac death, MI or TLR. During that period, the rate of MACE, cardiac death, MI and TLR were 15.8%, 4.3%, 1.0%, 10.0% respectively. The rate of MACE and TLR were not different between culotte stenting technique and S-KBT ($p=0.35$ and $p=0.29$ respectively).

Conclusions: Long term outcome after PCI of bifurcation lesions with biodegradable polymer coating BES might be promising.



TCT-413

Complex versus simple stent strategy of bifurcation lesions of the left main coronary artery

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Background: PCI to the left main coronary artery (LMCA) frequently involves the bifurcation with significant rates of repeat revascularisation. Single stent or 2 stent techniques may be related to the pattern of plaque distribution using the Medina system.

Methods: 254 patients underwent PCI to the distal LMCA, they were observed for a combined adverse endpoint (CAE), repeat revascularisation, MI and all-cause death. We categorised bifurcations into (Medina 1,1,1 and 0,1,1), both branch (BB) involvement or only a single branch (SB) involvement (all other Medina groups). Stent technique was categorised as simple (single stent) or complex (any 2 stent technique).

Results: 161 (63%) patients had BB involvement. Follow-up 2.26 (3.1) years. Median SYNTAX (IQR) 34.0(17.0) and 25.0(16.0), $p<0.000$. Median Additive EuroSCORE(IQR) was 7(6) and 6(5), $p<0.000$. Unadjusted CAE rates higher in the BB group at 30 days (5.6% vs 3.2%, $p=0.4$), 6 months (16.1% vs 7.5%, $p=0.05$), 12 months (24.8% vs 12.9%, $p=0.02$) and long term (43.5% vs 29.0%, $p=0.02$). A simple stent strategy was used in 59% of patients, 84% of the BB group. CAE rates were not different between patients treated by simple and complex techniques. After adjustment, BB disease and untreated severe right coronary artery(RCA) disease were independently associated with an increase in CAE, adjusted hazard ratios (95% CI) 1.84 (1.24 to 2.72) and 1.80 (1.22 to 2.65).